la!	CRF error Corrected by th STIC Syst Stranch Number: 08/3/9/4// CRF Processing Date; 3/29		
	Changed a file from non-ASCII to ASCII Edited by: Verified by: (ST		
	Changed the margins in cases where the sequence text was "wrapped" down to the next line.		
	Edited a format error in the Current Application Data section, specifically:		
	Edited the Current Application Data section with the actual current number. The number deputted by the applicant was the prior application data; or other		
	Added the mandatory heading and subheadings for "Current Application Data".		
	Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer		
	Changed the spelling of a mandatory field (the headings or subheadings), specifically: Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: 79		
	Inserted of corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:		
	Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.		
	Inserted colons after headings/subheadings. Headings edited included:		
	Deleted extra, invalid, headings used by an applicant, specifically:		
	Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of page numbers throughout text; other invalid text, such as		
	Inserted mandatory headings, specifically: (1) SEQ. CHARAR.: (Jug. 85)		
	Corrected an obvious error in the response, specifically:		
•	Edited identifiers where upper case is used but lower case is required, or vice versa.		
	Corrected an error in the Number of Sequences field, specifically:		
,	A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.		
D	eleted <i>ending</i> stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (errolle to a Patentin bug). Sequences corrected:		
	Other:		

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

46

RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/31/1999 TIME: 12:01:57

INPUT SET: S31238.raw

This Raw Listing contains the General Information Section and up to the first 5 pages.

```
SEOUENCE LISTING
 1
                                                              ENTERED
 2
          General Information:
 3
    (1)
         (i) APPLICANT: Nielsen, et al.
 6
        (ii) TITLE OF INVENTION: PEPTIDE NUCLEIC ACID CONJUGATES
 7
          et allegetar alle til til en er en er
 8
       (iii) NUMBER OF SEQUENCES: 148
 9
10
        (iv) CORRESPONDENCE ADDRESS:
11
               (A) ADDRESSEE: Woodcock Washburn Kurtz Mackiewicz &
12
                                        Norris
13
               (B) STREET: One Liberty Place 46th. Floor
14
              (C) CITY: Philadelphia
15
              (D) STATE: PA
16
              (E) COUNTRY: USA
17
               (F) ZIP: 19103
18
19
         (V) COMPUTER READABLE FORM:
20
         (A) MEDIUM TYPE: Floppy disk
21
              (B) COMPUTER: IBM PC compatible
22
               (C) OPERATING SYSTEM: PC-DOS/MS-DOS
23
               (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
24
25:
         (vi) CURRENT APPLICATION DATA:
26
               (A) APPLICATION NUMBER: 08/319,411
27
               (B) FILING DATE: 06-OCT-94
28
               (C) CLASSIFICATION:
29
30
31
        (vii) PRIOR APPLICATION DATA:
               (A) APPLICATION NUMBER: US 08/108,591
32
               (B) FILING DATE: 27-AUG-1993
33
               (C) CLASSIFICATION:
34
35
        (vii) PRIOR APPLICATION DATA:
36
               (A) APPLICATION NUMBER: EP/01219
37
               (B) FILING DATE: 22-MAY-1992
38
               (C) CLASSIFICATION:
39
40
        (vii) PRIOR APPLICATION DATA:
41
               (A) APPLICATION NUMBER: US 08/088,658
42
               (B) FILING DATE: 02-JUL-1993
43
               (C) CLASSIFICATION:
44
45
        (vii) PRIOR APPLICATION DATA:
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RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/31/1999 TIME: 12:01:57

INPUT SET: S31238.raw

47 48 49		(A) APPLICATION NUMBER: US 08/088,661 (B) FILING DATE: 02-JUL-1993 (C) CLASSIFICATION:
50		
51	(vii)	PRIOR APPLICATION DATA:
52		(A) APPLICATION NUMBER: US 08/275,951
53		(B) FILING DATE: 15-JUL-1994
54		(C) CLASSIFICATION:
55		
56	(viii)	ATTORNEY/AGENT INFORMATION:
57	(/	(A) NAME: Straher, Michael P.
58		(B) REGISTRATION NUMBER: 38,325
59		(C) REFERENCE/DOCKET NUMBER: ISIS-1158
60		(O) Maranan Books Notice Notic
61	7 1.00	TELECOMMUNICATION INFORMATION:
62	(IX)	(A) TELEPHONE: 215-568-3100
		(B) TELEFAX: 215-568-3439
63		(B) TELLERAX: 215-500-5459
64		
65	/A) THEO	NAMION FOR CEO ID NO.1.
66	(2) INFO	RMATION FOR SEQ ID NO:1:
67		ADAMBAR AND ARREST COT AS
68	(1)	SEQUENCE CHARACTERISTICS:
69		(A) LENGTH: 4 base pairs
70	•	(B) TYPE: nucleic acid
71		(C) STRANDEDNESS: single
72		(D) TOPOLOGY: linear
73		
74	(ii)	MOLECULE TYPE: nucleic acid
75		
76	(xi)	SEQUENCE DESCRIPTION: SEQ ID NO:1:
77		
78	GCAT	4
79		
80		
81	(2) INFO	RMATION FOR SEQ ID NO:2:
82	• • •	
83	(i)	SEQUENCE CHARACTERISTICS:
84	` '	(A) LENGTH: 4 base pairs
85		(B) TYPE: nucleic acid
86		(C) STRANDEDNESS: single
87		(D) TOPOLOGY: linear
88		(b) 10100001. 11.1001
89	/;;)	MOLECULE TYPE: nucleic acid
90	(11)	MODECODE TIPE: Nacietà dela
91	/ w i \	SEQUENCE DESCRIPTION: SEQ ID NO:2:
92	(XI)	DEGORACE DESCRIPTION: DEG ID NO.2:
	GG N ET	4
93	GCAT	. 4
94		•
95		THE TANK TOD OTHER TO WE A
96	(2) INFO	RMATION FOR SEQ ID NO:3:
97		
98	(i)	SEQUENCE CHARACTERISTICS:
99		(A) LENGTH: 4 base pairs

RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/31/1999 TIME: 12:01:57

		,,,	TIME: 12:01:5
10 10 10	1 (B) TYPE: nucleic acid (C) STRANDEDNESS: single		INPUT SET: S31238.raw
10	3 (b) TOPOLOGY: linear		
10: 10:	5 (11) MOLECULE TYPE: nucleic acid		
100 107	- (41) SEOURNCE DECOPESSOR	3:	
108	GCAT GCAT		
109		4	
110 111			
112 113	(2) INFORMATION FOR SEQ ID NO:4:		
113	(*) SEQUENCE CHARACTERISMES		
115 116	(A) LENGTH: 4 base pairs		and the second second
117	(D) TOPOLOGY, 1		
119			
120	(ii) MOLECULE TYPE: nucleic acid		
121 122	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:		
123	GCAT		•
124		4	
125			
126 127	(2) INFORMATION FOR SEQ ID NO:5:		
128 129	(i) SEQUENCE CHARACTERISTICS:		
130	(A) LENGTH: 4 hase point		
131	(D) TIPE: NUCleic acid		
132	(C) STRANDEDNESS: sincle		
133	(D) TOPOLOGY: linear	. *	
134	(ii) MOLECULE TYPE: nucleic acid		
135			•
136	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:		
137 138			
139	GCAT		
140		4	
141	(2) INFORMATION FOR SEQ ID NO:6:		
142 143			
144	(i) SEQUENCE CHARACTERISTICS:		
145	(A) LENGTH: 4 base point	•	
146	(B) TYPE: nucleic acid		
147	(C) STRANDEDNESS: single		
148	(D) TOPOLOGY: linear		
149	(ii) MOLECULE TYPE: nucleic acid		
150			·
151 152	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:		
132	TOW. SEQ ID NO:6:		

RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/31/1999 TIME: 12:01:58

		-5,00,017,411	TIME: 12:01
	53 GCAT	· IN	PUT SET: S31238.raw
	54	4	01 3E1: 331238.raw
	55 56		
	57 (2) INFORMATION FOR SEQ ID NO:7:		
16	(i) SEQUENCE CHARACTERISTICS:		
16	IDI TVDK' e manala a a a a a		•
16	(C) STRANDEDNESS		
16 16			
16:	-		
16	\/ MOLECID.R TODE,		
167	7 (XI) SEQUENCE DESCRIPTION		
168):7:	
169 170			
171		4	
172			
173	(2) INFORMATION FOR SEQ ID NO:8:		•
174	(+) SECURNCE CHADAGES		
175 176	(A) LENGTH: 4 base mains		
177	(b) Tipe: nucleic acid		
178	(C) STRANDEDNESS: single		
179	LD FORDLOGO, 12.	•	
180			
181 182			
183	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:	0.	
184	GCAT	0:	
185		4	
186			
187 188	(2) INFORMATION FOR SEQ ID NO:9:		
189			
190	(i) SEQUENCE CHARACTERISTICS:		
191	(A) LENGTH: 4 bace wain-		
192	(B) TYPE: nucleic acid (C) STRANDEDNESS: single		
193	(D) TOPOLOGY: linear		
194 195			
196	(ii) MOLECULE TYPE: nucleic acid		
197			•
198	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9	:	
199	GCAT	•	
200 201		4	
201	(2) THEODY		
203	(2) INFORMATION FOR SEQ ID NO:10:		
204			
205	(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 4 base pairs		
	base pairs		

RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/31/1999 TIME: 12:01:58

206 INPUT SET: S31238.raw (B) TYPE: nucleic acid 207 (C) STRANDEDNESS: single 208 (D) TOPOLOGY: linear 209 210 (ii) MOLECULE TYPE: nucleic acid 211 212 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10: 213 214 GCAT 215 216 (2) INFORMATION FOR SEQ ID NO:11: 217 218 219 (i) SEQUENCE CHARACTERISTICS: 220 (A) LENGTH: 4 base pairs 221 (B) TYPE: nucleic acid 222 (C) STRANDEDNESS: single 223 (D) TOPOLOGY: linear 224 225 (ii) MOLECULE TYPE: nucleic acid 226 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11: 227 228 229 GCAT 230 231 (2) INFORMATION FOR SEQ ID NO:12: 232 233 234 (i) SEQUENCE CHARACTERISTICS: 235 (A) LENGTH: 4 base pairs 236 (B) TYPE: nucleic acid 237 (C) STRANDEDNESS: single 238 (D) TOPOLOGY: linear 239 240 (ii) MOLECULE TYPE: nucleic acid 241 242 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12: 243 244 GCAT 245 246 247 (2) INFORMATION FOR SEQ ID NO:13: 248 249 (i) SEQUENCE CHARACTERISTICS: 250 (A) LENGTH: 4 base pairs 251 (B) TYPE: nucleic acid 252 (C) STRANDEDNESS: single 253 (D) TOPOLOGY: linear 254 255 (ii) MOLECULE TYPE: nucleic acid 256 257 (Xi) SEQUENCE DESCRIPTION: SEQ ID NO:13: 258

RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/31/1999

TIME: 12:01:59

****** PREVIOUSLY ERRORED SEQUENCES - EDITED *****

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(2) INFORMATION FOR SEQ ID NO:39:
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    634
    635
               (i) SEQUENCE CHARACTERISTICS:
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                    (A) LENGTH: 5 base pairs
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                    (B) TYPE: nucleic acid
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                    (C) STRANDEDNESS: single
    639
                    (D) TOPOLOGY: linear
    640
    641
             (ii) MOLECULE TYPE: nucleic acid
   642
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:
   643
   644
   645
         TTCTT
   646
                                                             5
  1034
         (2) INFORMATION FOR SEQ ID NO:66:
  1035
  1036
              (i) SEQUENCE CHARACTERISTICS:
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                   (A) LENGTH: 12 base pairs
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                   (B) TYPE: nucleic acid
  1039
                  (C) STRANDEDNESS: single
  1040
                   (D) TOPOLOGY: linear
 1041
 1042
            (ii) MOLECULE TYPE: nucleic acid
 1043
 1044
 1045
            (xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:
 1046
 1047
        CCAGGCUCAG AT
 1048
                                                               12
 1318
        (2) INFORMATION FOR SEQ ID NO:85:
 1319
 1320
            (i) SEQUENCE CHARACTERISTICS:
1321
                 (A) LENGTH: 20 base pairs
1322
                 (B) TYPE: nucleic acid
1323
                 (C) STRANDEDNESS: single
1324
                 (D) TOPOLOGY: linear
1325
1326
           (ii) MOLECULE TYPE: nucleic acid
1327
1328
           (xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:
1329
1330
      CTGTCTCCAT CCTCTTCACT
1331
                                                                          20
1332
1333
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RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/31/1999 TIME: 12:01:59

INPUT SET: S31238.raw

SEQUENCE VERIFICATION REPORT PATENT APPLICATION US/08/319,411

DATE: 03/31/1999 TIME: 12:01:59

INPUT SET: S31238.raw

Line

Error

Original Text

RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/29/1999 TIME: 14:05:25

INPUT SET: S31238.raw

This Raw Listing contains the General Information Section and those Sequences containing ERRORS.

1 2	SEQUENCE LISTING Corrected Diskette Not Comply (i) APPLICANT: Nielsen, et al.
3 4	(1) General Information:
5 6	(i) APPLICANT: Nielsen, et al.
7 8	(ii) TITLE OF INVENTION: PEPTIDE NUCLEIC ACID CONJUGATES
9 10	(iii) NUMBER OF SEQUENCES: 148
11 12 13 14 15 16 17	(iv) CORRESPONDENCE ADDRESS: (A) ADDRESSEE: Woodcock Washburn Kurtz Mackiewicz & Norris (B) STREET: One Liberty Place 46th. Floor (C) CITY: Philadelphia (D) STATE: PA (E) COUNTRY: USA (F) ZIP: 19103
19 20 21 22 23 24 25	 (V) COMPUTER READABLE FORM: (A) MEDIUM TYPE: Floppy disk (B) COMPUTER: IBM PC compatible (C) OPERATING SYSTEM: PC-DOS/MS-DOS (D) SOFTWARE: Patentin Release #1.0, Version #1.25
26 27 28 29 30 31	<pre>(vi) CURRENT APPLICATION DATA: (A) APPLICATION NUMBER: 08/319,411 (B) FILING DATE: 06-OCT-94 (C) CLASSIFICATION: (vii) PRIOR APPLICATION DATA:</pre>
32 33 34 35	(A) APPLICATION NUMBER: US 08/108,591 (B) FILING DATE: 27-AUG-1993 (C) CLASSIFICATION:
36 37 38 39 40	(Vii) PRIOR APPLICATION DATA: (A) APPLICATION NUMBER: EP/01219 (B) FILING DATE: 22-MAY-1992 (C) CLASSIFICATION:
41 42 43 44 45	(Vii) PRIOR APPLICATION DATA: (A) APPLICATION NUMBER: US 08/088,658 (B) FILING DATE: 02-JUL-1993 (C) CLASSIFICATION:

RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/29/1999 TIME: 14:05:26

INPUT SET: S31238.raw

```
46
         (vii) PRIOR APPLICATION DATA:
 47
                (A) APPLICATION NUMBER: US 08/088,661
 48
                (B) FILING DATE: 02-JUL-1993
 49
                (C) CLASSIFICATION:
50
51
        (Vii) PRIOR APPLICATION DATA:
52
                (A) APPLICATION NUMBER: US 08/275,951
53
                (B) FILING DATE: 15-JUL-1994
54
               (C) CLASSIFICATION:
55
56
       (viii) ATTORNEY/AGENT INFORMATION:
57
               (A) NAME: Straher, Michael P.
58
               (B) REGISTRATION NUMBER: 38,325
59
               (C) REFERENCE/DOCKET NUMBER: ISIS-1158
60
61
         (ix) TELECOMMUNICATION INFORMATION:
62
               (A) TELEPHONE: 215-568-3100
63
               (B) TELEFAX: 215-568-3439
64
65
```

ERRORED SEQUENCES FOLLOW:

```
(2) INFORMATION FOR SEQ ID NO:39:
  634
  635
             (i) SEQUENCE CHARACTERISTICS:
  636
                  (A) LENGTH: 5 base pairs
  637
                  (B) TYPE: nucleic acid
  638
                  (C) STRANDEDNESS: single
  639
                  (D) TOPOLOGY: linear
  640
            (ii) MOLECULE TYPE: nucleic acid
  641
  642
           (xi) SEQUENCE DESCRIPTION: SEQ ID NO
 643
 644
 645
       TTCTT
 646
                                                            5
       (2) INFORMATION FOR SEQ ID NO:66:
1034
1035
1036
            (i) SEQUENCE CHARACTERISTICS:
1037
                 (A) LENGTH: 12 base pairs
1038
                 (B) TYPE: nucleic acid
1039
                 (C) STRANDEDNESS: single
1040
                 (D) TOPOLOGY: linear
1041
           (ii) MOLECULE TYPE: nucleic acid
1042
1043
1044
1045
          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:
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RAW SEQUENCE LISTING PATENT APPLICATION US/08/319,411

DATE: 03/29/1999 TIME: 14:05:26

>	1046 1047 1048	CCAGGCUCAG AT	INPUT SET: S31238.raw
> > >	1318 1319 1320 1321 1322 1323 1324 1325 1326	(2) INFORMATION FOR SEQ ID NO:85: (A) LENGTH: 20 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear (ii) MOLECULE TYPE: nucleic acid	
>	1327 1328 1329 1330 1331 1332	(*i) SEQUENCE DESCRIPTION: SEQ ID NO:85: CTGTCTCGAT CCTCTTCACT	20

SEQUENCE VERIFICATION REPORT PATENT APPLICATION US/08/319,411

DATE: 03/29/1999 TIME: 14:05:26

INPUT SET: S31238.raw

Line	Error	
643 1047 1320 1321 1322 1323 1327 1327	Wrong Sequence Number # of Sequences for line conflicts w/ running total Unknown or Misplaced Identifier Wrong Or Missing Strandedness Value Wrong or Missing Sequence Topology	Original Text (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7: CCAGGCUCAG AT (A) LENGTH: 20 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear (xi) SEQUENCE DESCRIPTION: SEQ ID NO:85: (xi) SEQUENCE DESCRIPTION:
		(xi) SEQUENCE DESCRIPTION: SEQ ID NO:85: